**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Pursell, Gary
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-016068
**Date Inspected:** 07-Aug-2010

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

**OSM Arrival Time:** 700
**OSM Departure Time:** 1900
**Location:** Shanghai, China

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|---|---|---|---|---|---|---|---|
| **CWI Name:** | Zhu Zhong Hai | | | **CWI Present:** | ☑ Yes | ☐ No | |
| **Inspected CWI report:** | ☐ Yes | ☐ No | ☑ N/A | **Rod Oven in Use:** | ☑ Yes | ☐ No | ☐ N/A |
| **Electrode to specification:** | ☑ Yes | ☐ No | ☐ N/A | **Weld Procedures Followed:** | ☑ Yes | ☐ No | ☐ N/A |
| **Qualified Welders:** | ☑ Yes | ☐ No | ☐ N/A | **Verified Joint Fit-up:** | ☐ Yes | ☑ No | ☐ N/A |
| **Approved Drawings:** | ☑ Yes | ☐ No | ☐ N/A | **Approved WPS:** | ☑ Yes | ☐ No | ☐ N/A |
| | | | | **Delayed / Cancelled:** | ☐ Yes | ☑ No | ☐ N/A |

**Bridge No:** 34-0006
**Component:** OBG Trial Assembly

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 9BE

This QA Inspector performed Green Tag Dimension Control Inspection along with Caltrans QA Inspector Mr. Manoj Prabhune for the Segment 9BE from Panel Point (PP) 74 to PP 75 at the following locations:

The Deck Panel to the Deck Panel Diaphragm plate plumbness and flatness was verified and measured from east and west side of the Deck Panel Diaphragm at Panel Points (PP) 74 and PP 75. The QA Inspector measured the plumbness using carpenter square and performed a flatness check using 710mm Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9BW

This QA Inspector performed Green Tag Dimension Control Inspection along with Caltrans QA Inspector Mr. Manoj Prabhune for the Segment 9BW from Panel Point (PP) 73.5 to PP 76 at the following locations:

The diameter of the cope holes at the Corner Assembly (CA) were verified and measured at Panel Points (PP) 73.5, PP 74, PP 74.5, PP 75, PP 75.5 and PP 76 at the Cross Beam (CB) and Counter Weight (CW) side. The QA Inspector measured the diameter of the cope holes using a 150mm steel ruler.

The protrusion of the Deck Panel (DP) stiffener inside cope holes area at the Corner Assembly (CA) were verified and measured at the Panel Points (PP) 73.5, PP 74, PP 74.5, PP 75, PP 75.5 and PP 76 at the Cross Beam (CB) and Counter Weight (CW) side. The QA Inspector measured the protrusion of stiffener using a 150mm steel ruler.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9AE

This QA Inspector performed Green Tag Dimension Control Inspection along with Caltrans QA Inspector Mr. Manoj Prabhune for the Segment 9AE from Panel Point (PP) 71.25 to PP 73.25 at the following locations:

The skin flatness was verified and measured across the longitudinal butt weld at Side Panel (SP) to Corner Assembly (CA) at the Cross Beam (CB) and Bike Path (BK) side from Panel Point (PP) 71.25 to PP 73.25. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9AW

This QA Inspector performed Green Tag Dimension Control Inspection along with Caltrans QA Inspector Mr. Manoj Prabhune for the Segment 9AW from Panel Point (PP) 71.25 to PP 73.25 at the following locations:

The skin flatness was verified and measured across the longitudinal butt weld at Side Panel (SP) to Corner Assembly (CA) at the Cross Beam (CB) and Counter Weight (CW) side from Panel Point (PP) 71.25 to PP 73.25. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9DW to Segment 9EW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW9C-008. The welder identification was 067765, 067609 and 067752 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the

Bottom Panel, transverse splice weld. Please reference the pictures attached for more comprehensive details.

Segment 9DW to Segment 9EW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW9C-006. The welder identification was 037932 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Edge Panel transverse splice, Counter Weight side. Please reference the pictures attached for more comprehensive details.

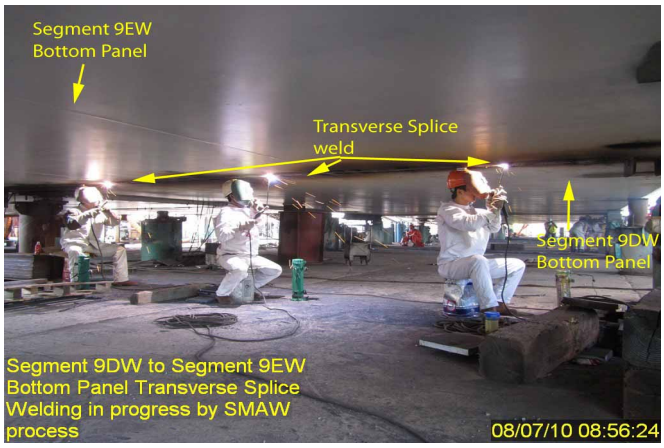
Segment 9DW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA065-006. The welder identification was 037932 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as the Corner Assembly hold back area at Work Point W2 on the Counter Weight side.

Segment 9EW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA067-002. The welder identification was 037932 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as the Corner Assembly hold back area at Work Point W2 on the Counter Weight side.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





**Summary of Conversations:**

No relevant conversations were reported on this date.

# WELDING INSPECTION REPORT

*( Continued Page 4 of 4 )*

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

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|---|---|---|
| **Inspected By:** | Math,Manjunath | Quality Assurance Inspector |
| **Reviewed By:** | Peterson,Art | QA Reviewer |